

Title (en)

Method and apparatus for transient temperature compensation in gas analyzer equipment

Title (de)

Verfahren und Vorrichtung zur Kompensation von Temperatur-Transienten in Gasanalysatoren

Title (fr)

Procédé et dispositif de compensation de températures transitoires dans des appareils analyseurs de gas

Publication

EP 0651244 B1 20020403 (EN)

Application

EP 94308089 A 19941102

Priority

FI 934871 A 19931103

Abstract (en)

[origin: EP0651244A1] The invention relates to a method and apparatus for temperature compensation in gas analyzer equipment for transient error caused by temperature change. According to the method, a radiation source (1) is used for transmitting electromagnetic radiation through a gas mixture to be analyzed, the intensity of radiation transmitted through the gas mixture being analyzed is detected by means of a thermal detector (4) comprising a radiation detecting sensor element (16) and a reference sensor element (17) for generating an output signal proportional to the concentration of gas being analyzed, the temperature of said thermal detector (4) is measured either directly or indirectly, the measured detector temperature values are recorded as a function of time, and the output signal of the thermal detector (4) is temperature compensated by a correction term dependent on the temperature rate of change (DT) of the thermal detector. According to the invention, the uncorrected output signal V_{meas} of the thermal detector (4) is temperature compensated by adding a correction term V_{comp} dependent on the temperature rate of change (DT) of the thermal detector to said output signal. <IMAGE>

IPC 1-7

G01N 21/35

IPC 8 full level

G01N 21/35 (2006.01)

CPC (source: EP US)

G01N 21/3504 (2013.01 - EP US); **G01N 2201/0231** (2013.01 - EP US); **G01N 2201/1211** (2013.01 - EP US)

Cited by

EP1744146A1; CN102177422A; EP2169369A1; CN103575655A; GB2401939A; GB2401939B; DE10315864B4; US7326931B2

Designated contracting state (EPC)

DE FR GB NL SE

DOCDB simple family (publication)

EP 0651244 A1 19950503; **EP 0651244 B1 20020403**; DE 69430289 D1 20020508; DE 69430289 T2 20021031; FI 934871 A0 19931103; US 5542285 A 19960806

DOCDB simple family (application)

EP 94308089 A 19941102; DE 69430289 T 19941102; FI 934871 A 19931103; US 33269294 A 19941101